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Artificial Futures: Imagining AI through art

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1. INTRODUCTION

This project explores visions of Artificial Intelligence by combining approaches from art research and the social sciences. It inquires into the "sociotechnical imaginaries" (Jasanoff & Kim 2015) that shape the development of AI innovations. Looking at two fields of application – "Smart Environments" and "Smart Bodies" –, it asks how the future(s) of AI are imagined by societal actors. Offering both a critical perspective and artists´ own visions of AI developments in the aforementioned fields, which materialise in and emerge from the artworks, the project aims to contribute to analytical insights and normative debates on AI and social order.

Artificial Intelligence is currently seen as a key technology and is controversially discussed in society. While some are excited about the new possibilities AI offers, others fear that AI will become too dominant and lead to the loss of jobs and privacy. Social researchers have shown that such visions significantly shape the development of a technology. Societal perceptions of the opportunities and risks of a technology and its future applications have a major influence on which development paths are followed and which alternatives are rejected, and on the ways social order is co-produced with and organised along new and emerging technologies (e.g. Jasanoff & Kim 2015). Social researchers have therefore suggested to conduct "vision assessments" to examine the developments and social impacts of innovative technologies (Grin & Grunwald 2000). However, the work of artists has been neglected in this research, even though artists have been engaged in visioning for a long time. Artists have often been at the forefront of reflecting on technological and social changes by creating work that points to both the dangers and the new possibilities of innovation (Notaro 2020). This project therefore assumes that art, due to its specific expertise in imagining the future, can contribute its own perspectives on the development of technologies and propose alternative visions. The project thus draws on both art research and social research to explore how AI futures are and could be imagined.

2. EXPLORING ARTIFICIAL FUTURES

Art research has been practised and discussed in the European art context for more than two decades. Art historians and theorists have debated the epistemological implications of art practice and the role of art in the research process. Many of these scholars agree that art can produce original knowledge and contribute to our understanding of the world (e.g. Borgdorff 2012). More recently, social researchers have acknowledged that art research can enrich the social science analysis of science and technology (Salter, Burri & Dumit 2017; Borgdorff, Peters & Pinch 2020; Burri 2021; Rogers et al. 2021). Drawing on these debates, art research is considered an important approach in this project. Together with social research methods, it is used to explore AI visions of societal actors, which are the focus of this project. It asks how scientists and other societal actors perceive AI and its impact on our future lives, i.e. on the lives of people in the societies where these actors live. Although future is a flexible concept, it is defined by most actors as a medium-long term, spanning 20 to 30 years – in contrast to the more long-term popular science fiction narratives about AI. More specifically, the project examines the "sociotechnical imaginaries" related to AI, that is, the "collectively held, institutionally stabilized, and publicly performed visions of desirable futures, animated by shared understandings of forms of social life and social order attainable through, and supportive of, advances in science and technology" (Jasanoff 2015 p.4). These are explored in two selected fields of AI.

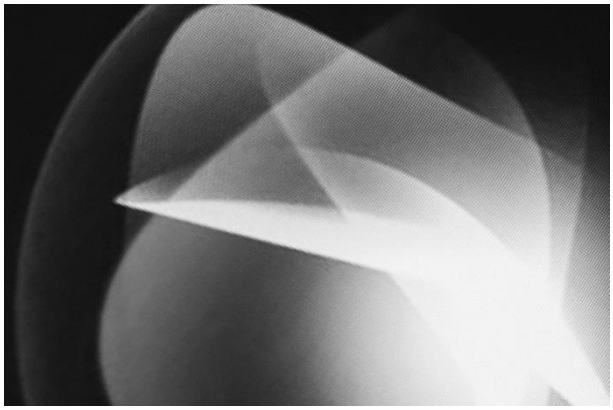

Figure 1: *© Professur für Wissenschafts- und Technikkulturen HCU, 2019.*

The first sub-project ("Smart Environments") examines visions relating to intelligent environments. It focuses in particular on "Smart Living", i.e. application systems that are intended to make everyday life in one´s own home easier. AI applications are increasingly being integrated into walls and furniture, and smart speakers such as Amazon Echo and Google Home act as digital interactive assistants that reorganise our everyday lives. The second sub-project ("Smart Bodies") explores various body-technology interfaces that are enhanced by AI. This involves both wearable external interfaces and physically implemented interfaces. The first category includes "Wearable AI" such as smart textiles or fitness trackers, but also high-tech robotic prostheses such as exoskeletons. The second category includes interfaces that invasively connect technology to the body, such as complex brain-machine interfaces. The project explores how people imagine interacting with such technically networked bodies and environments in the future.

3. SOCIETAL VISIONS, ALTERNATIVE FUTURES

In the first year of the project, the art and social research included Internet research and literature study, but mainly fieldwork in various AI research environments and at companies, fairs, conferences and exhibitions. Building on this research, the second year is dedicated to developing artworks to be shown publicly.

The project has both an analytical and normative orientation. In an analytical perspective, insights into societal visions of AI are gained. In a normative perspective, the artists of the project unfold their own visions of how AI can shape societal life in the future, thus showing in their artworks both critical perspectives – for example, ethical aspects of data privacy – and alternative possibilities of this technology. In doing so, the project aims to contribute to the debates on how AI and the social order will and should develop. The EVA conference presentation displays and reflects the current state of the work.

4. ACKNOWLEDGEMENTS

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5. REFERENCES

Borgdorff, H. (2012) *The Conflict of the Faculties: Perspectives on Artistic Research and Academia*. Leiden: Leiden University Press.

Borgdorff, H., Peters, P. and Pinch, T. (eds) (2020) *Dialogues Between Artistic Research and Science and Technology Studies*. London and New York: Routledge.

Burri, R.V. (2021) Doing Research by Means of Art. In: Rogers, H.S., Halpern, M.K., Hannah, D. and de Ridder-Vignone, K. (eds). *Routledge Handbook of Art, Science, and Technology Studies*. London and New York: Routledge. Ch.10.

Grin, J., Grunwald, A. (eds) (2000) *Vision Assessment: Shaping Technology in 21st Century Society. Towards a Repertoire for Technology Assessment*. Berlin: Springer.

Jasanoff, S. (2015) Future Imperfect: Science, Technology, and the Imaginations of Modernity. In: Jasanoff, S. and Kim, S.-H. (eds) (2015). 1–33.

Jasanoff, S. and Kim, S.-H. (eds) (2015) *Dreamscapes of Modernity: Sociotechnical Imaginaries and the Fabrication of Power*. Chicago: The University of Chicago Press.

Notaro, A. (2020) State of the Art: AI through the (artificial) artist´s eye. In: Weinel, J., Bowen, J.P., Diprose, G. and Lambert, N. (eds), *Proceedings of EVA London 2020 (Electronic Visualisation and the Arts)*. http://dx.doi.org/10.14236/ewic/EVA2020.58.

Rogers, H.S., Halpern, M.K., Hannah, D. and de Ridder-Vignone, K. (eds) (2021) *Routledge Handbook of Art, Science, and Technology Studies*. London and New York: Routledge.

Salter, C., Burri, R.V. and Dumit, J. (2017) Art, Design, and Performance. In: Felt, U., Fouché, R., Miller, C.A. and Smith-Doerr, L. (eds). *The Handbook of Science and Technology Studies*. 4th edition. Cambridge MA: MIT Press. 139–167.